The Law and Practice of Delay Claims: A Practical Introduction

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1. **Introduction**

1.1. The purpose of this paper is to present a brief practical introduction to the nature of delay claims, their purpose, and how to establish an entitlement to succeed on such claims.

2. **Delay – What it Entails**

2.1. A characteristic feature of construction contracts is that the contractor normally has a specified period within which to complete the bulk of the construction works. While different forms of contract define the beginning and end of such periods differently, the usual phrases adopted to identify such points are the “Commencement Date”, and the “Date of Practical Completion”.

2.2. The importance of these dates is not simply that they indicate the dates upon which the works are intended to commence, and substantially complete.1 Rather, since the essence of a construction contract is that the Employer, during the construction period, is required to deliver possession of the site to the Contractor, they represent the dates upon which the Employer is deemed to cede possession of the site to the Contractor, and, when the works are substantially complete, the date when the Employer takes the site back into his possession. During the construction period, the Contractor is legally responsible for the site, and has an obligation to insure against risks and perils both to the works, and to third parties. Likewise, in this period, the Contractor is entitled to bring onto the site, and to maintain, site infrastructure such as portacabins, site compounds, machinery, scaffolding and the whole apparatus required to undertake the building works.

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1 Normally defined as the date upon which the works are so substantially complete as to be ready to be taken over and put into use for their intended purpose, with only minor finishing works left to be completed.
The Contractor, as part of his tender, will normally have priced for the provision of such site infrastructure, usually under the heading of a bill item entitled “Preliminaries”.

2.3. Linked to the fact that the construction period (sometimes called the “Contract Period”) is of a stipulated and defined length, construction contracts usually contain provision that, if the Contractor takes longer than the stipulated period to bring the works to practical completion, he will be obliged to pay Liquidated and Ascertained Damages (“LADs”) to the Employer, normally fixed by the Contract at a stipulated rate per week. All of the legal requirements concerning liquidated damages apply to LADs, i.e. they must represent a genuine pre-estimate of the loss which the Employer would expect to suffer in the event that he were not to be delivered the building on time.

2.4. If the construction contract does not, unusually, contain a provision stipulating a set time within which the Contractor is to complete the works, then time is said to be “at large”. In such circumstances, the Contractor will be deemed to have a reasonable period of time to complete the works.\(^2\) What that reasonable period might be, in any given contract, will always be a matter for speculation and debate. Only if the Contractor has failed to complete the works within a reasonable time can the Employer thereafter sue for damages for breach of contract, which will then be assessed in the ordinary way, at common law.

2.5. However, where the contract provides that the works are to be completed within a stipulated period, then, if an event occurs for which the Employer is liable (this can be an event for which, under the contract, the Employer is deemed to be liable, or it may, alternatively, comprise an act or omission of the Employer which would amount to a breach of contract), then it may be that, as a consequence, the Contractor will be prevented from completing the contract within the stipulated time. In such a case, if the contract does not contain some mechanism whereby the time to complete can be extended, then an Employer act of prevention, having the effect of rendering it impossible for the Contractor to complete the Contract within the stipulated time, is said to have the effect of putting time “at large”\(^3\).

2.6. In order to counter the possibility that time, in such circumstances, might be “put at large”, most construction contracts contain express provision whereby, in certain circumstances, the Contractor may be afforded an extension of the time to complete.\(^4\) Typically the mechanism provided for by the Contract is such as to provide that, where completion within the stipulated time has been rendered impossible by reason of some event for which the Employer is liable under the contract, the Contractor may apply to the Contract Administrator (who may be the Architect, or the Employer’s Representative, or otherwise so described) who is thereafter given a discretion, to be exercised independently, and in a quasi-judicial manner.

\(^3\) Hudson, Para 6.025
\(^4\) Hudson, Para 6.026. See also Peak Construction Ltd v McKinney Foundations Ltd (1970) 1 B.L.R. 114.
fashion, to award, or certify, the Contractor a fair and reasonable extension of the time to complete, sufficient to make up for, and to compensate for, the preventative effects of the Employer liable event.

2.7 Contract provisions providing for extension of time are often complex, and vary from contract to contract. Sometimes they require the Architect, or Employer’s Representative, to provide the Contractor with a fair and reasonable extension of time, upon the happening of an Employer act of prevention, even in the absence of an application for an extension of time by the Contractor. But most contract provisions require an express application for an extension of time by the Contractor. In some cases, the contract provisions require the application for an extension of time (“EOT”) to be made quickly, within a stipulated time from the breach, or as soon as reasonably practical. The requirement to serve timely notice of an intention to claim EOT may be (and often is) described as a condition precedent. Sometimes, the EOT application is required to be accompanied by detailed particulars, including an express statement of the precise EOT requested by the Contractor. Finally, any decision by the Architect, Contract Administrator, or Employer’s Representative, as to what EOT is to be awarded to the Contractor, is usually subject to a right of appeal or challenge by the Contractor through the dispute resolution mechanism in the Contract.

3 Consequences of an Award of EOT.

3.1. From the above, it can be seen that an application by a Contractor for EOT seeks to achieve three purposes:

(i) If awarded, it will allow him a longer period of time within which to complete the works, sufficient to make up for the consequences of the Employer act of prevention;

(ii) If awarded, it will entitle him to claim additional payment to compensate him for the cost of maintaining his infrastructure on site for the extended period. It is important to appreciate that, in a competitive tender, the Contractor will have priced the works on the basis that his preliminaries can be expected to be required to be on site for the contract period, and no longer. If, for example, the Contractor has to maintain his infrastructure on site for a longer period (which could be for months) then he will incur a cost in connection therewith for which he will require to be remunerated. An award of EOT normally carries with it an entitlement for the Contractor to be paid for his extended preliminaries;

(iii) An award of EOT will relieve the Contractor from the obligation which he would otherwise owe to the Employer to pay LADs during the extended period of completion.

3.2 Accordingly, where the construction period has been lengthened due to matters for which the Employer is liable, it will inevitably follow that the Contractor will want to claim for EOT. A claim by a Contractor to be awarded EOT is
commonly described as a “Delay Claim”. This is to be distinguished from a claim for “Disruption”, which is a pure monetary claim which seeks to recover the extra cost incurred by the Contractor as a result of inefficiencies to individual construction activities caused by event for which the Employer is liable, but which do not, in fact, delay completion of the works.
4. **Criteria for the Award of EOT.**

4.1. In assessing a claim by a Contractor to be awarded EOT, the Architect, or Employer’s Representative, will typically look for proof by the Contractor of the following matters:-

(i) That an event has occurred which has prevented the Contractor from completing the works within the contract period, i.e. an Employer liable event. The event may include acts which are wholly legitimate, such as, for example, the fact that the Employer has required, and the Architect has subsequently instructed, a variation to the works. Alternatively, the Employer may have failed to deliver vacant possession of the entire of the site e.g. because of a failure of a tenant to leave the site in time. Alternatively, the Contract may afford the Contractor an entitlement to seek EOT and additional remuneration if, for example, he encounters ground conditions different to those anticipated at the time of the Contract. The list of circumstances which may comprise Employer liable events is, in truth, endless.

(ii) The Architect/Employer’s Representative must thereafter be satisfied that the event in question, has had the result that the works will not have been capable of being completed within the contract period, such that an EOT, of a defined length is required to restore the status quo ante.

4.2. With regard to the proving of (ii) above, not every act of prevention by an Employer will have the effect of preventing the works from being completed within the contract period. For example, the Employer act of prevention may have had the effect of impeding some element of the works which, though delayed, can quite happily proceed in parallel with the remainder of the works, and will not, in fact, impede the completion of those works. Delay to such an element of the works will not entitle a Contractor to be awarded EOT, though it may justify a claim for Disruption.

4.3. On the other hand, there will be some elements of the works which, if delayed, will inevitably have a “knock on” effect on the remainder of the works. For example, unexpected ground conditions may prevent the completion of the foundation excavations and, thus, the completion of the foundations. Where the foundations have been delayed, it will inevitably follow that the remainder of the substantial construction elements, such as the construction of floors, rising walls, the roof, etc will also be delayed.

4.4. In this regard, the phraseology used in the construction sector to identify an event which, if delayed, will have a “knock on” effect on the completion of the remainder of the works, is known as an event said to be on the “critical path”. The “critical path” is what is sometimes described as a pathway through the programme for the works that identifies the longest period for the completion of critical items which, if delayed, will have an effect on the capacity of the works to be completed by the date for completion.
4.5. It is only if an Employer act of prevention can be shown to have delayed the completion of an element of the works that can be shown to be on the “critical path” that will, therefore, entitle a Contractor to receive an award of EOT.

5. **Establishing the Critical Path**

5.1. It can immediately be seen that, in order to establish an entitlement to EOT, a Contractor must first prove to the satisfaction of the Architect or the Employer’s Representative where the “critical path” of the project lay at the point in time at which the Employer act of prevention occurred, and that such event caused delay to the completion of that activity. This can often prove quite difficult in practice.

5.2. The starting point for the Contractor will be to establish, to the satisfaction of the Architect/Employer’s Representative, where the critical path lay at the commencement of the project. The Contractor, in this regard, has a very important advantage. As Contractor, he normally has complete control over how and when he will perform the works. While, in many cases, the logical construction methodology to be adopted may be largely the same no matter who is awarded the contract, each individual Contractor will normally have his own preferences and construction sequences which will suit his convenience, the plant available to him, the availability of sub-contractors etc. But it will normally be essential for the Contractor to prepare, initially for his own use (though most contracts also provide that same must be provided to the Architect/Employer’s Representative, at a minimum for their information, but in some cases also for their approval) his own Construction Programme. Sometimes the Contractor will be required to present his draft Construction Programme with his Tender. In some cases the construction methodology and sequencing may be prescribed by the Employer (who may, for example, stipulate periods of time when the works will require to be temporarily suspended for one reason or other).

5.3. The Contractor’s Programme will normally be presented in a bar chart format, often using widely available computer software, which will identify the sequence in which the works are intended to be carried out, and over what period. The Contractor will normally stipulate the periods of time required for each element of the works e.g. X week for site clearance, Y weeks for earthworks and foundation excavations, Z weeks for the construction of foundations etc. Each element of the works will be expected to have a commencement and completion date identified in the Programme.

5.4. Contractors’ Programmes can range from a very simple hand sketched programme, involving less than 20 activities, to an extremely detailed computerised programme involving hundreds of individual activities.

5.5. Often, the Contractor’s Programme may involve each element of the works being sub-divided. For example, the construction of foundations may involve the installation of blinding, the construction of formwork, the installation of the reinforcing steel work, first pour of concrete, cube testing of concrete, second
pour of concrete, more cube testing of concrete, and dismantling of formwork. Each individual component will normally be allotted a specified construction period, usually measured in days.

5.6. However the Contractor presents his programme, it will usually be possible to discern therefrom a critical path by reference to which the impact of any future delay events can be assessed.

5.7 But there can often be controversy concerning a Contractor’s Programme. For example, a Contractor may present a particularly aggressive programme, suggesting a very tight timetable for the carrying out of different elements (normally the initial elements) of the works. Such a programme may enable the Contractor to contend an entitlement to EOT at a very early stage, and upon the happening of even the slightest act of employer prevention. It is for this reason that Architects/Engineers Representatives are often wary of giving approval to the Contractor’s initial programme.

6. The “Baseline Programme”

6.1. The Contractor’s initial programme is sometimes referred to as his “baseline programme”, because it is the programme by reference to which delay events must be thereafter assessed.

6.2. As stated above, there can often be dispute as to the adequacy of the Contractor’s Baseline programme. An Architect/Employer’s Representative, called upon to approve a Contractor’s baseline programme, will often be very sceptical. Even if he may think it largely in order, he may, for tactical reasons, decline to issue a formal approval for same, and may often seek to interrogate the adequacy of the programme by various queries. In many cases, as the contract works progress, the day-to-day exigencies of site operations can often see the requirement for formal approval by the Architect/Employer’s Representative of the Contractor’s Baseline Programme consigned to the “back seat”.

6.3. However, in the event of an application for EOT, it will be essential for the Architect/Employer’s Representative (or any subsequent Arbitrator) to be satisfied that the Contractor’s Baseline Programme was, in fact, achievable.

6.4. Proving that the Contractor’s Baseline Programme was, in fact, achievable can often involve quite a detailed review both of what would be required to complete each individual work element, and of the Contractor’s resources. For example, a Contractor who has priced to bring on site only one excavator (whose outputs can be capable of establishment through operator’s handbooks etc) may have difficulty in proving that the time allowed for the carrying out and completion of excavations could, in fact, have been achieved with the use of the single excavator priced for in his tender, and which he subsequently brings on site. Thus, verification of a Contractor’s Baseline Programme can often be a complicated exercise involving the careful measurement, or estimation, of quantities in relation to the work elements concerned, assessed by reference to the Contractor’s
planned, and actual, capacity and work output potential, to be assessed by reference to the plant and labour resources intended to be, and actually, brought on site.

6.5. In practice, if matters reach Arbitration stage, it will usually be left to specialist delay experts, sometimes supported by construction methodology experts, to express opinions as to whether or not the Contractor’s Baseline Programme was reasonable and achievable.

6.6. As can be readily imagined, it often happens, in complex construction arbitrations, that much time and effort can be spent seeking to achieve agreement between the parties’ Delay Experts on an appropriate Baseline Programme.

6.7. It often happens, in practice, that the Architect/Employer’s Representative, or the parties’ Delay Experts, may identify inconsistencies and inadequacies in the Contractor’s Baseline Programme, as presented during the construction phase. For example, the Contractor may have failed to identify an important work element in the Programme which should have been properly and separately programmed, and which would affect his capacity to achieve completion within his planned construction period.

6.8. Further, it can sometimes happen that what are known as “logic links” may not have been properly identified by a Contractor. These may be “links” such as:-

“Start to start”:- The identification of some construction activity which must necessarily be first commenced before it will be possible for a second construction activity also to commence;

“Finish to start”:- The identification of some construction activity which must be first completed before it would be possible for the Contractor to commence the next construction activity.

6.9. It therefore often happens that, during the advancement of a delay claim, the parties’ Delay Experts may require to correct (by agreement, or, if not agreed, through decision by the Arbitrator) the Contractor’s Baseline Programme by, for example (i) inserting additional activities which the Contractor failed to include, (ii) extending work activity durations, where it can be demonstrated that the Contractor has failed to adequately plan for the correct activity duration of the work element concerned, (iii) inserting logic links, where necessary, (iv) including adjustment for industry holiday periods, or Employer-stipulated break periods, or (v) for such other reason as may be appropriate.

6.10. Only when an agreed, or properly adjusted, Baseline Programme has been properly identified will it be thereafter possible to identify the original appropriate “critical path” for the project as about to be undertaken by the Contractor.

7. **Impacting the Critical Path**
7.1 Thereafter, it will be necessary for the Contractor to demonstrate the occurrence of an event, for which the Employer is liable, which can be shown to have “impacted” the “critical path”, i.e. had the effect of lengthening the duration of a work activity that can be shown to have been on the “critical path”. This can entail a number of elements.

7.2. Firstly, it will be necessary to demonstrate that the event in question was one which, in truth, was one for which the Employer bore a responsibility. This can often be a matter of controversy. For example, a Contractor who, on reviewing the contract documents, believes he needs additional information to complete a work activity may seek additional instructions from the Architect. The Architect/ER may disagree that the Contractor requires the additional information sought, contending that such additional information is of a type that ought reasonably to have been expected to lie within the knowledge and understanding of a competent Contractor. In order to avoid dispute, he may, nevertheless, agree to provide the additional information sought, without prejudice to his position that the Contractor did not need that information. The works are delayed while the additional information is provided. The Architect may thereafter decline an EOT to take account of the delays caused by the requirement for the Contractor to wait for the additional information sought. In any subsequent Arbitration, the Arbitrator may be required to decide upon whether or not the Contractor was entitled, under the Contract, to the additional information sought.

7.3. Even if the event concerned can be shown to have been an event for which the Employer was liable, there may be issues as to whether the requirement to provide that additional information in truth delayed the works. For example, the works may already have been in delay by reason of another matter for which the Contractor is liable. This can sometimes give rise to the thorny issue of “concurrent delay”, addressed below.

7.4. Often the most critical issue for the Contractor to prove is the extent of any delay caused by the Employer liable event. In this regard, it is usual for the Contractor to be required to prove, or establish, the extent of the entitlement to EOT required. This is often assessed in great detail down either to a day, or a half day, or possibly even a quarter day (though usually a day, or a half day are the smallest integers involved). Throughout, the Contractor must be able to demonstrate that, both prior to, and subsequent to the end of the period of delay, he has diligently sought to advance the works, with the result that the ensuing delay can be shown to have been solely caused by the Employer liable delay event.

8. **Concurrent Delays**

8.1 It often happens that delay to the completion of the various works elements can be shown to have been due to a number of different matters, for some for which the Employer is liable, and for some for which the Contractor is liable. Where the

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5 Though he has no obligation to use extra resources or effort to mitigate the effects of the Employer’s Delay.
Contractor’s capacity to complete the works within the Contract Period has been impaired by reason of some event for which he is deemed to be liable (for example, due to the effects of weather for which, under the Contract, he is liable, or by reason of the fact that some element of the works has had to be dismantled and re-done, or by reason of the failure on the part of one of his Sub-Contractors, or for a multitude of other reasons), then the Contractor has no entitlement to EOT. Instead, he will be at risk of suffering LADs.

8.1 However, during such periods, it can sometimes happen that, separately, an Employer-related event has also occurred such as, for example, the issue of a variation. In this regard, the Architect may have, for example, directed the suspension of further work on a certain part of the project, on the critical path, while that element of the works is redesigned to incorporate the new requirements of the Employer. Alternatively, there may be a delay in the provision of information which the Contractor is contractually entitled to receive under the Contract.

8.2 Where, accordingly, an element of the works has been delayed by two or more reasons, for some of which the Employer is liable, and for some of which the Contractor is liable, the resultant delays are said to be “concurrent”.

8.3 There can often be a debate as to whether or not a given delay is said to be truly “concurrent”. There is a school of thought that says that, for delays to be truly “concurrent”, they must relate to the same work elements, and concern the same precise periods of time. True concurrency, in this sense, can often be therefore difficult to demonstrate.

8.4. However, for practical reasons, most analysts, and judges, in most countries, appear to accept that, where it can be demonstrated that the works were, or would have been, inevitably delayed by reason of some event for which the Employer is liable, and also by reason of some event for which the Contractor is liable, that the Contractor is thereupon entitled to a fair and reasonable EOT to take account of the delay for which the Employer was liable. Thus the existence of a truly concurrent Delay Event, for which the Contractor is also liable, will rarely result in the Contractor’s EOT claim being defeated.6

8.5 However, since the basis of recovery of additional cost will require the Contractor to demonstrate that, but for the Employer breach, he would not have suffered the loss, or cost, concerned, it is usually the case that, in cases of concurrent delay, the Contractor will be unable to demonstrate that, but for the Employer’s breach, he would not have suffered the floss concerned, since, had the Employer not been in breach, he would otherwise have been required to incur the additional cost since same would inevitably have resulted from his own breach. Accordingly, the rule normally followed in most construction cases will be that an event of concurrent delay will normally entitle the Contractor to EOT and consequent

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relief from LADs, but will not entitle him to advance a claim for the recovery of extended preliminaries or other site infrastructure cost.\footnote{See De Beers v MTDS Origin IT Services UK (2011) BCR 274, Para 177, approved in Walter Lilly at Para 368}

9. **Accommodating the Contractor’s Own Events of Delay/Inefficiencies**

9.1 From the foregoing it can thus be seen that, in the assessment of any delay claim by a Contractor, it will be necessary also to take account of any separate events of delay for which the Contractor was individually (and not concurrently) liable. Such events, if they can be shown to have affected the critical path, must also be taken into account by the Architect/Employer, or Arbitrator. For example, a Contractor seeking an EOT of e.g. 12 weeks, may find himself faced with a defence by the Employer to the effect that a significant part of that delay was, in truth, caused by events for which the Contractor was himself responsible.

9.2 One practical problem which can sometimes arise concerns circumstances where, during a period of Employer Delay, the Architect/Employer’s Representative notes that, for no apparent reason, the Contractor’s operations, on other sectors of the work, appear to “go slow”. This sometimes gives rise to an issue as to whether or not the Contractor has been “pacing”, i.e. slowing down progress on those other elements of the works, in order to absorb, and keep busy, labour resources which might otherwise be idle by reason of delay caused by the Employer breach; or whether, on the other hand, the Contractor has simply, despite his best efforts, been unable to achieve the progress planned. It can sometimes be difficult for an Arbitrator to decide whether or not a Contractor, who appears to have been making slow progress on other elements of the works during a period of Employer Delay, has been guilty of simple inefficiency, or has been, on the other hand (as he will no doubt claim) “pacing”.

9.3 Another issue that can cause significant difficulty concerns the position where the Contractor’s Baseline Programme may demonstrate some periods of hiatus between where one activity may be shown to be planned to conclude, and the next (successor) activity shown as intended to start. Such periods are sometimes referred to as “float”. Where a Contractor’s Programme has “float”, same can be sometimes used by the Contractor to absorb his own inefficiencies. But what happens if, due to the Contractor’s own efficiency, his progress is sufficient not to require him to absorb, or use, any part of his “float”, but an Employer Delay Event intervenes which, though causing elongation and delay to the construction activity entitled to the benefit of the float, has not caused the duration of that activity to extend beyond the expiry of the period of “float”? Sometimes, in such circumstances, the Employer will argue that, since he has “got to the float” first, his acts of prevention have caused, in fact, no delay to the overall completion of the project. On the other hand, the Contractor will be likely to contend that he is the owner of the “float”, such that, if used up to absorb the effects of the Employer’s delay, he may find himself unable to avail of the “float” in the event that the works are subsequently delayed for some event for which he is himself
liable. While there can be different schools of thought about this, it is submitted that, in general, the Contractor, whose absolute right it is to plan the progress of the works to suit his own convenience, is entitled to ownership of the “float”, such that the existence of “float” should not deprive him of an entitlement to EOT if otherwise deserved. It should be noted, however, that some contracts make express provision for ownership of the float, and, indeed, permit the float to be availed of by the party who first causes delay to the progress of the works.

9.4 It can thus be seen that the resolution of a delay claim will require the Arbitrator to consider carefully the evidence adduced by both sides for the purposes of assessing whether or not the delay in the completion of the works was, in truth, caused by events for which the Contractor was liable, or whether the delay to completion was caused by events for which the Employer was liable, and can require careful assessment of such issues as concurrent delay, pacing, and the existence of float.

9.5 Finally, (and inevitably), it often happens that, in practice, Contractors will often seek to “play up” periods of delay for which the Employer can be shown to be liable, and “play down” periods of delay for which the Contractor himself was liable, and vice versa.

10. Presenting the Delay Claim – The Delay Analyst

10.1 Having regard to the complexity of the issues involved, it is normal for parties in a construction arbitration to engage Specialist Delay Analysts to assist them in the preparation of their delay claims.

10.2 The practice of delay analysis has been sometimes described as a “black art”, or a process of “smoke and mirrors”. Often it can be a matter of careful judgment as to the assessment by the delay experts of various events on various elements of the works. It is not unusual to see a delay analysis presented by a Contractor which, fortuitously, just manages to show that the period of delay caused by the various events for which the Employer is responsible exceeds, in almost every case, the delay effects of those for which the Contractor was responsible, thus perhaps ascribing the totality of the overall period of delay to the Employer. Conversely the Employer’s Expert may seek to do likewise, blaming all delays on the Contractor.

10.3 The basic “tools of the trade” of the Delay Analyst will comprise an electronically adjustable sophisticated computerised programme model, such as provided by Primavera, or Microsoft Project. Some Delay Analysts have gone so far as to develop their own sophisticated software by reference to which delay events can be analysed, often involving sub-programmes known as “fragnets” which can then be adjusted and subsequently inserted into the overall computerised model.

10.4 The basic task to be undertaken by Delay Experts will involve identification, firstly, of an appropriate (and if possible agreed) Baseline Programme. Thereafter, it will be necessary for the Delay Analysts to identify, and agree, if
possible, what is called the “As-Built” programme. This is a programme, based on the Baseline Programme, which identifies each of the work elements in question and identifies the dates when, as a matter of fact, the work element in question actually commenced, and were actually completed, on site.

10.5 Identification of the “As Built” programme can also be a matter of significant debate in a delay claim. There can often be dispute as to the date upon which a particular work element can be shown to have completed. It often happens that the completion dates of the different work elements will not have been formally recorded on site (though the date of completion of some of the larger elements may be identified in site minute meetings etc). Often it will be necessary to have recourse to dated site photographs, or the oral evidence of witnesses, for the purposes of establishing when individual elements of the works were completed.

10.6 Only when the As-Built Programme has been identified, will it be possible to compare both the “As-Planned” and “As-Built” durations of the various work elements concerned, and therefrom identify where delay to the completion of the project actually occurred.

10.7 Thereafter, it will be necessary for the Delay Analysts to identify (through, for example, the Contractor’s pleaded case, or the evidence and recollection of the Architect/Employer’s Representative), the various events that caused or contributed to the delay to completion of each of the work elements concerned.

10.8 Having identified the various events of delay, the Delay Analysts will thereafter required to identify (or if in dispute, the Arbitrator will require to so find), the periods of delay caused or contributed to the overall delay to completion caused by each individual event of delay.

10.9 It is usual for the work of the Delay experts to “narrow the gap” between the parties, thus leaving the matters remaining in contention being as follows:-

- Whether the delay events identified comprise the entirety of the delay events responsible for delaying completion (the Employer, for example, may contend for the existence of additional Contractor-related delay events);

- Where legal liability for the consequences of the delay event lies, i.e. with the Employer or with the Contractor (a matter for the ultimate determination of the Arbitrator, if not agreed);

- The proper length of the period of delay to be attributed to the delay event concerned. (The Contractor may argue for a longer delay effect, the Employer for a shorter).

10.10 Once the foregoing analysis has been completed (or, if in dispute, so found by the Arbitrator), it will usually be a simple matter of adding up the number of days of delay found to be due to events for which the Employer is liable, and the total
arising will constitute the due entitlement of the Contractor to receive EOT in respect of the time concerned.

11 Methodology of Analysis

11.1 It can be immediately seen from the foregoing exercise that the capacity of the Contractor to prove an entitlement to EOT, and to have same supported by his Delay Analyst, will be dependent, to a large extent, on the capacity to which he can prove the relevant facts.

12.2 In this regard, facts will be best proven through the availability of site records, e-mails, documents, site minute meetings, site photographs, site diary extracts, supported by the oral evidence and testimony of the Contractor’s witnesses, Site Foreman, Sub-Contractors etc. For the Employer, the contrary evidence will normally be expected to come from his Architect, Site Clerk, or Employer’s Representative, or the Resident Engineers on site responsible for monitoring the progress of the works, and who will also have records. The records kept may include, for example, progress statements or payment applications from the Contractor (which may assert a degree of progress or percentage completions of the different elements of the works as at the date of the payment application), which can also be used to assess progress.

11.3 If the Contractor’s records are very good, it will, in many cases, be possible to prove, in detail how the works were progressing up to the date of occurrence of the event of Employer breach sought to be relied upon as a basis for a claim to EOT.

11.4 Where the quality of the contract records is sufficiently complete, the Delay Analysts may have recourse to what is known as a “Time Impact Analysis”. This is a form of analysis which takes the Baseline Programme, and identifies each succeeding event of delay. Thereafter the Baseline Programme is adjusted to show the appropriate degree of completion of the works immediately prior to the occurrence of the delay event concerned, and then proceeds to “impact” the Baseline Programme with the anticipated delaying effects of the event concerned. The adjusted programme will thus provide a “snapshot” of the Contractor’s entitlement to EOT as assessed at the date of occurrence of the delay event. Thereafter, the Delay Analyst will proceed to the next event of delay, updating progress up to that date, then adding in the next delay event to the Programme, and then impacting the effects of the next delaying event. Sometimes the impacting of the second delay event will exacerbate the delaying effects of the first delay event; sometimes it will have a separate and new effect. This analysis will result in a new adjusted programme.

11.5 The delay analysis will continue, in this manner, until it has taken account of every delay event on the project.
11.6 An analysis done in the foregoing detail is called a “Time Impact Analysis” (“TIA”). In complex cases, it may require the Delay Analyst to analyse and impact the effects of hundreds of separate events of delay. In consequence, the costs of the preparation of a detailed TIA can cost hundreds of thousands of Euro.

11.7 It can immediately be seen that a detailed delay claim can be both extremely complex and costly to mount, and be capable of taking a very long period of time to conclude.

11.8 In complex construction disputes, such as relating to the construction of a motorway where the construction cost may exceed €100M, and an Employer’s LADs claim may run into millions, it can be nevertheless seen that a proper delay analysis will be an unavoidable expense, and will be essential to both defeat the Employer’s claims to LADs, and to establish any consequent entitlement of the Contractor to extended preliminaries.

11.9 Where it is not possible to do a TIA, because, for example, the contract records are not sufficiently adequate, it may still be possible for the Delay Analyst to present a compelling analysis, or report, using a different, or modified, sequence of reporting, such as using analysis by “windows” (assessing the contract by taking specific periods of time and assessing how progress was delayed up to those times), or possibly by identifying delays to different segments of the works. A consideration of the many different forms of delay analysis which may be possible, dependent upon the quality of the contract records, would go beyond the introductory ambit of this paper. However, there are many different forms of delay analysis, short of reaching the standard of a TIA, which can suffice to establish entitlement to EOT.

12. **The Essential Elements Involved in Establishing a Claim to EOT**

12.1 As can be seen from the foregoing, the essential elements normally required to be established by a Contractor to support a claim for EOT will be as follows:-

(i) Identification of a series of Employer liable events of delay;

(ii) Proper proof that such events impacted, and delayed the completion of, construction activities that can be demonstrated to have been on the critical path;

(iii) Proof as to the length of delay (and thus the quantum of the entitlement to EOT) caused by each delay event;

(iv) Proof that the delay effects were not caused (at least not caused beyond a concurrent delay effect) by events for which the Contractor was responsible;
(v) All of the foregoing to be supported by contemporary documents, Witness Statements, and supported by a competently prepared Delay Analysis prepared to an appropriately qualified Delay Expert.

12.2 When the Contractor has established (or been awarded by the Arbitrator) appropriate settlement to EOT, it will thereafter be necessary for the quantum of the Contractor’s entitlements by way of extended preliminaries, to be duly assessed. This exercise is normally undertaken in a separate hearing module, before the Arbitrator, and will involve the Contractor giving evidence as to the rates tendered for his preliminaries, the appropriateness of those rates, with the Contractor’s claim duly vouched, tested, and verified through the support of a Quantum Expert.

12.3. The proper presentation of an EOT claim, at Arbitration, will involve the usual sequence that practitioners will be familiar with including:-

- The proper pleading (supported by appropriate particulars) of the Contractor’s claims for EOT;

- Prior engagement, under the direction of the Arbitrator, of the Delay Experts, for the purposes of endeavouring to identify an agreed (i) Baseline Programme and (ii) As-Built Programme, with, where appropriate, any differences in opinion appropriately identified, for resolution in the Arbitral Hearing;

- Subsequent engagement between the Delay Experts comparing their respective Delay Analysis, again, endeavouring to agree as much as possible;

- Preparation by the Delay Experts of appropriate Scott Schedules;

- Directions by the Arbitrator with regard to oral hearings concerning all remaining matters in dispute;

- Exchange of Witness Statements in the usual way;

- Exchange of the final Reports of the Delay Experts;

- An oral hearing before the Arbitrator, followed by his ruling on the entitlement to EOT.

- Followed, where appropriate, by a quantum hearing in relation to the Contractor’s entitlement to recover extended preliminaries or, as appropriate, to determine the Employer’s entitlements as to LADs.

13. **Smaller Cases**
13.1 In large contracts, both the Contractor and the Employer will retain extensive site staff and supervisory resources. The contract documents may impose detailed obligations on the Contractor with regard to the degree of record keeping to be undertaken, including detailing the type of computerised programme model to be maintained by the Contractor, and updated as to progress, wherefrom any delay claims can be properly assessed. The supervisory staff concerned, on both sides, will be expected to keep detailed records of progress, any events likely to involve delay, and to promptly address such issues through correspondence, e-mails etc. All this material will greatly facilitate the prosecution, and defence, of a delay claim by the Contractor at a later stage.

13.2 In smaller contracts, the same degree of record-keeping is not usually undertaken, nor required. In, for example, the building of a one-off house, or a small commercial unit, it may be that the Contractor will have prepared only a basic hand-drawn sketch as to his intended Construction Programme. Requests for additional information may be made by telephone, and not properly recorded. Site meeting minutes may be very succinct and not properly record progress, or events of delay. The Contractor may allow himself to be directed by the Employer who, for example, may attend on site and suggest that a window shown on the drawing to be placed here, is preferred by him (or her) to be placed there. The Contractor, anxious to please his Employer may accommodate the request and only subsequently consult with the Architect. There may be a degree of informality inconsistent with the formal contract documents executed by the parties (assuming a formal contract document was, in fact, so executed). How are delay claims in such circumstances to be assessed?

13.3 The standard building contracts normally require the Architect to allow the Contractor a “fair and reasonable” EOT where same is found to be deserving. The Architect is given a broad discretion in this regard, again to be exercised independently, and in a quasi-judicial manner, and the Arbitrator, if the parties dispute the Architect’s certification as to EOT, may do likewise.

13.4 In such circumstances, it will still remain the case that the Contractor must prove, to the satisfaction of the Arbitrator, that the event of Employer Delay described has, on the balance of probabilities, caused delay to the completion of the works.

13.5 In such cases, even the Contractor’s basic hand-drawn sketch can be easily turned into a basic computerised electronically adjustable model by a competent Contract Claims Consultant, or Delay Expert. However, the list of activities may be small, say 2 dozen or so. The events of delay may, again, be relatively few, (say, again less than a dozen), and the impacting process is much less time-consuming than would be the case in a complex delay claim. Again, the engagement of a Delay Analyst, even in a relatively small claim, may be desirable. In each case it is a question of balancing, on the one hand, the cost to be incurred in commissioning a proper delay analysis on the one hand, with the overall cost and benefit to the Contractor (or Employer) of establishing, or defeating, the delay claim, on the other hand.
Finally, in very small cases, the Architect, with his experience, (and an Arbitrator, in a dispute) will be able to assess the evidence and, using a “broad brush” approach, still assess an appropriate degree of EOT, always bearing in mind, again, the necessity for the Contractor to show, in every case, that the Employer Delay Event did, on the balance of probabilities, delay the overall completion of the works.

14. **Concluding Remarks**

14.1 It is hoped that the foregoing general introduction to the presentation of an EOT claim will be of assistance to practitioners. However, it is essential to remember that, in each case, the starting point is to consider, carefully, the provisions of the contract in question. In Ireland, at present, construction disputes tend to involve a consideration of the RIAI Standard Conditions of Contract, or, alternatively, the various FIDIC forms of Contract (often heavily amended by Public Authorities), or, as is becoming more and more prevalent, the GCC Conditions of Contract, which govern the majority of Public Works Contracts placed since 2007 in the State.

14.2 Each form of Contract has its own highly specific provisions concerning the processing of delay claims. In some cases, the Conditions of Contract impose strict obligations with regard to the prior agreement as to the Contractor’s Baseline Programme, the periodic updating thereof for progress during the currency of the Contract, the maintenance of records, and, in particular, the requirement, as a condition precedent, to provide Notice of an Intention to Claim EOT.

14.3. Likewise, issues pertaining to delay have generated considerable controversy in the case law which will require to be monitored carefully from time to time, and organisations such as the Society of Construction Law, have produced useful publications explaining and detailing best practice with regards to the presentation of delay claims.  

14.4 Further, it is to be remembered that, during the construction period, EOT granted by an Architect/ER can generally not be reclaimed; hence any EOT granted during the construction period is likely to be very conservative, and probably inadequate. Furthermore, the tension which often results on a construction site, for one reason or another, can see EOT claims mounted either excessively vigorously, or aggressively, or, alternatively, where valid and appropriate EOT claims are lodged, unfairly rejected for one reason (often tactical) or another.

14.5 Accordingly, delay claims can sometimes be the most complex and difficult construction disputes to bring to resolution. The resolution may entail considerable cost and delay. The presentation and defence often requires very close liaison between the construction personnel concerned, the Delay Analysts,

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8 See, for example the SCL “Delay and Disruption Protocol” (2002)
9 For the most detailed textbook consideration of delay claims, see “Delay and Disruption in Construction Contracts”, Pickavance, 4th Ed. (2010).
Contract Claims Consultants, and the legal teams concerned. Contractors and Employers, particularly in large contracts, are usually very familiar with the relevant principles concerned, and are very astute as to the tactical issues arising. The groupings on both sides tend to constitute closely knit “teams” and it is necessary for the legal advisers concerned, and, as appropriate, Counsel, to appreciate that, in discharging their roles in formulating and presenting delay claims, they will be expected to be very much part of the “team”, and will benefit, in particular, from the expertise and familiarity with such issues which will normally be possessed by competent delay experts, and by the other members of the team.

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